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- 1. My name is Steven C. Effertz. I have first-hand personal knowledge of the facts contained in this declaration, and if called upon to testify I would and could do so competently as set forth herein.
- 2. I have worked as a consultant for plaintiff Ameranth, Inc. in the *Ameranth v*. *Pizza Hut et al.* lawsuit, and in that capacity I (along with other consultants) reviewed source code materials produced by the initial group of defendants in the Spring of 2012. I have extensive experience in software development and analysis as set forth in my resume, a true and correct copy of which is attached hereto.
- 3. In the defendant source code materials that I reviewed in the Spring of 2012 for Ameranth, there were numerous problems and difficulties that inhibited our review of source code and made it much more difficult and unnecessarily time-consuming and costly. A few examples are as follows:
 - (a) Some defendants produced source code in non-native formats, some going so far as to manually print screen displays of code and then create PDF files of the code to prevent the code from being electronically reviewed or "searched".
 - (b) Many defendants produced source code files that were curiously and inexplicably missing the comments and notations that software developers routinely write into their code to annotate their work and assist in review, revision, debugging, and similar tasks.
 - (c) None of the source code sets that I reviewed included all versions and revisions of the produced code; and at least one defendant produced source code that was an obviously incomplete older version of its code that did not correspond to many of the features that are present and obviously visible to anyone viewing that defendant's website/system.
 - (d) None of these source code sets were produced with any means to check or verify the completeness of what was produced. Additionally, none of the defendants provided (or even identified) the software tools and other materials

needed to design, code, assemble, compile, link, load, install, integrate, test, distribute, and maintain the source code, which often necessitated extra work and made the initial review process difficult and unnecessarily time-consuming.

- (e) Many defendants made source code available for review only at a remote third-party "escrow facility" with very constrained hours of review (usually 9 am to 4:30 pm) and only on days when the escrow facility had a room available at its offices. There were several occasions on which Ameranth requested to review source code at the escrow facility on a certain day and were denied access after being told that there were no available rooms and that Ameranth would have to re-schedule for a date several days thereafter.
- 4. These and other problems can be avoided, and proper source code review facilitated at reasonable expense, with certain minimal guidelines to accompany source code produced by defendants for Ameranth's review. These guidelines include:
 - (a) Production of source code, software, and all related materials in the format and manner that the materials were created and maintained by the producing party, including production of software and code in its native format, without removing or altering file names, comments, header files, make files, or any other aspect of the native materials prior to production to Ameranth. This will permit consultants to more readily review the materials produced, in the format in which they were created and maintained by the producing party, and to check the materials for completeness (or non-completeness).
 - (b) In order for consultants to properly review the software and source code and all versions of each Accused Instrumentality, all relevant versions of the source code should be produced along with the capability for the consultants to readily see and review all revisions and revision history. One straightforward and reliable way of accomplishing this is for the producing party to make available the entire "source code tree" for each version of the software, in the

format in which it was created and maintained. (A "source code tree" is not a complicated device — the term simply means an organized, hierarchical collection of files and directories that holds the source code, *i.e.*, a standard means for organizing and retaining all of the relevant files and directories, which can be stored on typical media for storing software such as a hard drive.) Failing to produce source code in this way — e.g., permitting the random, unorganized or jumbled production of only certain bits of the relevant source code — makes review and analysis of the source code unnecessarily costly and time-consuming; it would be as if an entire jigsaw puzzle is required to show a complete picture but only a few randomly-selected pieces of the puzzle were actually given to a person tasked with assembling the pieces into a completed picture.

(c) Additionally, effective source code review requires not only the code itself, but also the documentation, software tools, and other materials needed to design, code, assemble, compile, link, load, install, integrate, test, distribute, and maintain the software. What is needed here is the same set of materials that would be included in a "software escrow" or "source code escrow" account¹ -- i.e., Software Documentation, Build Scripts, Make Files, Source Code, Assemblers, Compilers, Linkers, Loaders, Libraries, Databases, Installers, and Utilities. In this case, that will include providing a complete list of all software tools used to create and maintain the source code, along with copies of any such software tools that are not publicly available for use or purchase. Making a fully-enabled "test environment", such as that in which a defendant would test/run/revise/debug their own system, available for Ameranth's consultants to

A software escrow or source code escrow account is typically created when licensee licenses software from its developer/owner (licensor) and the licensee requires assurance that the software can be maintained or revised even if the developer goes out of business or otherwise becomes unable to maintain the software. Such an escrow account typically entails depositing a copy of the entire source code tree with a third party, accompanied by everything that the licensee requires to independently maintain the software, including documentation, software tools and/or specialized hardware.

1 use in reviewing and analyzing the software, would also be acceptable and 2 would enable efficient review of the source code produced. Conversely, 3 production of nothing more than disparate snippets of source code, without the 4 entire set of software or the tools necessary to assemble, compile, run, and test 5 the software—as was largely done by the defendants in the Spring of 2012 source code productions-- would make review of the source code very difficult 6 7 and needlessly burdensome without decreasing the cost to the producing party. 8 (In fact, producing a complete set of source code avoids the substantial 9 expense of culling only certain portions of source code to produce while 10 withholding the bulk of the source code, as I understand defendants propose to 11 do in this case.) 12 (d) As noted above, much review time can be unnecessarily consumed in trying to 13 determine whether the source code produced is actually complete (or in what 14 aspects it is not complete). This unnecessary time and expense can be avoided 15 if the producing party verifies the completeness of its production; one way of 16 doing so is by recreating an executable version of the software produced and 17 providing the means for the reviewing consultant(s) to replicate the process. 18 Further, making more complete productions of source code does not increase 19 any security risk; it simply makes the process of reviewing and analyzing it more efficient. 20 21 I declare under penalty of perjury under the laws of the United States of America that 22 the foregoing is true and correct and that I executed this declaration on January 10, 2013, in 23 San Diego, California. 24 25 26 Steven C. Effertz

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I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct and that I executed this declaration on January 10, 2013, in San Diego, California.

occ. The

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